CLAIM AMENDMENTS

1. (Canceled)

2. (Currently amended) A method as recited in Claim ~~1~~8, further comprising:
receiving, from a first host on the network, a third message requesting a network address; and
sending, to the first host in response to the second message, a second response offering a first network address based on the first set of network addresses and the second set of network addresses.

3. (Original) A method as recited in Claim 2, wherein the first set includes the first network address and the second set does not include the first network address.

4. (Currently amended) A method as recited in Claim ~~1~~8, further comprising receiving from a network administrator a third message indicating a third set of network addresses for dynamically configuring hosts on the network.

5. (Canceled)

6. (Currently amended) A method as recited in Claim ~~5~~8, further comprising reporting the usage of the first set of network addresses.

7. (Canceled)

8. (Currently amended) ~~A method as recited in Claim 5,~~ A method of providing sets of network addresses for dynamically configuring hosts on a network, the method comprising the computer-implemented steps of:
assigning one or more subnets of a given size to a pool of available subnets;
sending a first request from a first host for a first count of network addresses for a first set of network addresses for dynamically configuring hosts on the network;

determining if there are available network addresses in a pool of available addresses and if not then selecting a first subnet from the pool of available subnets and adding said selected first subnet's network addresses to said pool of available addresses;

receiving a first message indicating the first set of network addresses;

receiving a second message from a second host requesting a second count of network addresses for a second set of network addresses for dynamically configuring hosts on the network;

determining the second set of network addresses based at least in part on the first set of network addresses and the second count;

sending a first response indicating the second set of network addresses;

determining usage of the first set of network addresses wherein the usage comprises a proportion of a number of network addresses used compared to a total number of addresses in the first set;

wherein:

the first message further indicates a first time interval for use of the first set; and

the method further comprises sending, before the first time interval expires, a second request for renewal of use of the first set; and

the second request includes data indicating the usage of the first set.

9. (Currently amended) A method as recited in Claim ~~1~~ 8 further comprising the computer-implemented steps of:

receiving a third message for renewal of use of the second set, the third message including data indicating the usage of the second set,

determining a third set of network addresses for dynamically configuring hosts on the network based on the second set and the usage of the second set wherein the usage is determined in part based on a number of network addresses used in a local table of leased network addresses for subnets used; and

sending a second response indicating the second set of network addresses.

10. (Currently amended) A method as recited in Claim ~~1~~ 8, wherein each set of the first set and the second set is indicated by a base address and a number indicating a range of addresses above the base address.

11. (Original) A method as recited in Claim 10, wherein the number indicating the range is a mask that indicates a number of most significant bits in the base address that are constant over the range.

12. (Currently amended) A method as recited in Claim ~~1~~8, wherein the second set is empty.

13. (Currently amended) A method as recited in Claim ~~1~~8, wherein the second set is the same as the first set.

14. (Currently amended) A method as recited in Claim ~~1~~8, wherein the hosts on the network include interfaces on a router on the network.

15. (Currently amended) A method as recited in Claim ~~1~~8, further comprising:
receiving, from a router on the network, a third message requesting a third count of network addresses for a third set of network addresses for configuring interfaces on the router;
determining the third set of network addresses based at least in part on the first set of network addresses, the second set of network addresses, and the third count; and
sending, to the router in response to the third message, a second response indicating the third set of network addresses.

16. (Currently amended) A method as recited in Claim ~~1~~8, wherein:
the first message received includes data indicating that a first server should send a third set of network addresses for dynamically configuring hosts on the network; and
the method further comprises sending, in response to the data indicating that the first server should send the third set, a second request for the third set of network addresses.

17. (Original) A method as recited in Claim 16, further comprising receiving, from the first server in response to the second request, a third message indicating the third set of network addresses.

18. (Currently amended) A method as recited in Claim ~~1~~8, further comprising:
determining that a third set of network addresses should be sent based at least in part on the first set and the second set; and
inserting into the first response data indicating that a third set of network addresses for dynamically configuring hosts on the network should be sent.

19. (Previously presented) A method as recited in Claim 18, wherein:
the method further comprises determining usage of the first set of network addresses wherein the usage is determined in part based on a number of network addresses used in a local table of leased network addresses for subnets used.; and
said step of determining that a third set of network addresses should be sent is based at least in part on the usage of the first set.

20. (Original) A method as recited in Claim 18, further comprising receiving, in response to the data indicating that the third set of network addresses should be sent, a third message requesting the third set of network addresses.

21. (Previously presented) A method of providing sets of network addresses for dynamically configuring hosts on a network, the method comprising the computer-implemented steps of:
receiving, from a first server on the network, a first message indicating a first set of network addresses for dynamically configuring hosts on the network and a first time interval for use of the first set, wherein the first set is selected from a first subnet's available network addresses in a pool of available address;
determining usage of the first set of network addresses wherein the usage is determined in part based on a number of network addresses used in a local table of leased network addresses for subnets used; and
sending, to the first server before the first time interval expires, a second request for renewal of use of the first set,
wherein the second request includes data indicating the usage of the first set.

22. (Previously presented) A method of providing sets of network addresses for dynamically configuring hosts on a network, the method comprising the computer-implemented steps of:

sending, to a first server on the network, a first message indicating a first set of network addresses for dynamically configuring hosts on the network and a first time interval for use of the first set, wherein the first set is selected from a first subnet's available network addresses in a pool of available address;

receiving, from the first server before the first time interval expires, a request for renewal of use of the first set, the request including data indicating the usage of the first set wherein the usage is determined in part based on a number of network addresses used in the local table of leased network addresses for subnets used;

determining a second set of network addresses for dynamically configuring hosts on the network based on the first set and the usage of the first set; and

sending to the first server a second message indicating the second set of network addresses.

23. (Currently amended) A method provided in Claim ~~1~~8 further comprising the computer-implemented steps of:

receiving, from ~~the~~ a first server in response to the first request, a first message including first data indicating the first set of network addresses and second data indicating that the first server should send a second set of network addresses for dynamically configuring hosts on the network; and

sending, to the first server in response to the data indicating that the first server should send the second set, a second request for the second set of network addresses.

24. (Canceled)

25. (Currently amended) A computer-readable medium carrying one or more sequences of instructions for providing sets of network addresses for dynamically configuring hosts on a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

assigning one or more subnets of a given size to a pool of available subnets;

sending a first request from a first host for a first count of network addresses for a first set of network addresses for dynamically configuring hosts on the network;

determining if there are available network addresses in a pool of available addresses and if not then selecting a first subnet from the pool of available subnets and adding said selected first subnet's network addresses to said pool of available addresses;

receiving, in response to the first request, a first message indicating the first set of network addresses;

receiving a second message from a second host requesting a second count of network addresses for a second set of network addresses for dynamically configuring hosts on the network;

determining the second set of network addresses based at least in part on the first set of network addresses and the second count; ~~and~~

sending, in response to the second message, a first response indicating the second set of network addresses;

determining usage of the first set of network addresses wherein the usage comprises a proportion of a number of network addresses used compared to a total number of addresses in the first set;

wherein:

the first message further indicates a first time interval for use of the first set; and

the method further comprises sending, before the first time interval expires, a second request for renewal of use of the first set; and

the second request includes data indicating the usage of the first set.

26. (Currently amended) An apparatus for providing sets of network addresses for dynamically configuring hosts on a network, comprising:

means for assigning one or more subnets of a given size to a pool of available subnets;
means for sending a first request from a first host for a first count of network addresses for a first set of network addresses for dynamically configuring hosts on the network;
means for determining if there are available network addresses in a pool of available addresses and if not then selecting a first subnet from the pool of available subnets and adding said selected first subnet's network addresses to said pool of available addresses;
means for receiving, in response to the first request, a first message indicating the first set of network addresses;
means for receiving a second message from a second host requesting a second count of network addresses for a second set of network addresses for dynamically configuring hosts on the network;
means for determining the second set of network addresses based at least in part on the first set of network addresses and the second count; ~~and~~
means for sending, in response to the second message, a first response indicating the second set of network addresses;
means for determining usage of the first set of network addresses wherein the usage comprises a proportion of a number of network addresses used compared to a total number of addresses in the first set;
wherein:
the first message further indicates a first time interval for use of the first set; and
further comprising means for sending, before the first time interval expires, a second request for renewal of use of the first set; and
the second request includes data indicating the usage of the first set.

27. (Currently amended) An apparatus for providing sets of network addresses for dynamically configuring hosts on a network, comprising:
a network interface that is coupled to the network for sending and receiving one or more packet flows therefrom;
a processor; and

one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:

assigning one or more subnets of a given size to a pool of available subnets;

sending a first request from a first host for a first count of network addresses for a first set of network addresses for dynamically configuring hosts on the network;

determining if there are available network addresses in a pool of available addresses and not any then selecting a first subnet from the pool of available subnets and adding said selected first subnet's network addresses to said pool of available addresses;

receiving, in response to the first request, a first message indicating the first set of network addresses;

receiving a second message from a second host requesting a second count of network addresses for a second set of network addresses for dynamically configuring hosts on the network;

determining the second set of network addresses based at least in part on the first set of network addresses and the second count; ~~and~~

sending, in response to the second message, a first response indicating the second set of network addresses;

determining usage of the first set of network addresses wherein the usage comprises a proportion of a number of network addresses used compared to a total number of addresses in the first set;

wherein:

the first message further indicates a first time interval for use of the first set; and

the sequences of instructions further cause carrying out sending, before the first time interval expires, a second request for renewal of use of the first set; and

the second request includes data indicating the usage of the first set.

28. (Currently amended) A method as recited in Claim ~~1~~8, wherein the second message includes data indicating that a requesting device that issued the second message does not

make assignments of individual network addresses from among the second set of network addresses such that all future requests for such assignments will be relayed back.

29. (Currently amended) A method as recited in Claim ~~1~~8, wherein the second message includes data indicating that a requesting DHCP server should free the second set of network addresses as soon as possible by making no new assignments of addresses or subnets therefrom.

30. (Currently amended) A method as recited in Claim ~~1~~8, wherein the second message includes data indicating that a requesting DHCP server should discontinue use of the second set of network addresses when all addresses in the subnet are unassigned.

31. (Canceled)